New Hampshire
Wildlife Action Plan

On the Cover
Moose, Peregrine falcon © Alan Briere
Brook trout © Eric Engbretson
Blanding's turtle © NHFG / Marquis Walsh photo
Karner blue butterfly © NHFG / Victor Young photo

TABLE OF CONTENTS

CHAPTER FIVE

Conservation Strategies

CHAPTER SIX

Monitoring

CHAPTER SEVEN

Implementation

APPENDICES

SPECIES AND HABITATS

WAP COORDINATION AND OUTREACH

TEMPLATES AND INSTRUCTIONS

Executive Summary

New Hampshire's Wildlife Action Plan (WAP) completion comes at a crucial time in the state's history. *New Hampshire's Changing Landscape 2005*, a recent report from the Society for the Protection of New Hampshire Forests (SPNHF), chronicles the increasing human footprint on the state's natural habitats, and documents the immediate need for improved habitat conservation. In 1983, the reforestation that followed farming and logging of the 19th and 20th centuries reached its peak, with 87 percent of the state's lands forested. By 1997, the U.S. Forest Service (USFS) estimated that the state's forest cover dropped three percent, to 84 percent. Unlike the 18th and 19th century conversion of forests to fields, today's land conversion to roads, housing, and businesses permanently alters natural habitats and degrades their value to native wildlife. The WAP points to where the most vulnerable species and habitats are in relation to these rapid changes to the natural landscape.

New Hampshire's WAP is the result of a mammoth effort by hundreds of people and organizations committed to ensuring the future welfare of wildlife in New Hampshire and providing opportunities for people to enjoy use of these resources. The WAP is the most comprehensive wildlife assessment ever completed in New Hampshire. Thirty-four wildlife experts from 10 conservation agencies, organizations, and academic institutions served as contributing authors.

In a parallel effort, a 33-person citizen advisory group shaped the management framework for New Hampshire's big game species. Working with the New Hampshire Fish and Game Department (NHFG) wildlife biologists and program administrators, management policies and population objectives were synthesized into a Big Game Management Plan (Appendix E). Big game management objectives were integrated into the WAP's Chapter 5, Conservation Strategies.

At New Hampshire's Wildlife Summit in March of 2004, 110 individuals representing conservation, recreation, business, and community interests identified priority conservation issues. Via a web survey, 1,256 individuals provided additional input. Preventing habitat loss from development, educating citizens about wildlife management, and improving land-use planning were survey respondents' top priorities. During May of 2005, a sub-group of Wildlife Summit participants identified tools that could effectively be used to implement WAP strategies in the political and social climate of New Hampshire.

Using all available data, a core team of biologists identified 123 species and 27 habitats in greatest need of conservation. More than a half-million dollars of State Wildlife Grant federal funds were provided to contract with experts at partnering organizations, agencies, and academic institutions to complete assessments of these species and habitats. Each partner brought significant resources to match federal funds.

To ensure consistency and comparability of information, a wildlife species and habitat template was provided to all contracted experts. Four major elements—distribution and habitat, species and habitat condition, species and habitat risk assessment, and conservation actions—were addressed. In total, 131 species and habitat profiles were completed for all habitats and nearly all priority wildlife, including several invertebrate and fish species (nineteen "at risk" species were not profiled, either because there was a lack of information for those species, or because the conservation concerns facing those species were best addressed at the habitat level).

Following the development of species and habitat profiles, technical analyses were conducted to assess the condition of habitats and risks to wildlife. The results of these technical assessments were incorporated into each profile and are summarized in this document.

During the condition assessment phase, we compiled data that tripled the number of records in our wildlife occurrence database, and we used sophisticated science to develop the first maps ever to predict the location and compare the current condition of all matrix forests, terrestrial, wetland, and aquatic habitats over the entire state. Mapping was also completed for a subset of well-studied species.

In the risk assessment, we called on wildlife experts to conduct a structured assessment for 62 priority wildlife species and 27 habitats. Preliminary results identified 16 wildlife species that are highly at risk of extirpation from New Hampshire. Included in this list are Karner blue butterflies, piping plovers, and roseate terns. Eleven of the 27 priority habitats assessed ranked in the highest conservation risk category. Examples include Appalachian Oak Pine Forests, Pine Barrens, Salt Marshes, Lowland Spruce-Fir Forests, and Vernal Pools. Further review and analysis of species and habitats that appear to be in most jeopardy will be a first step in implementation.

After completing analysis of individual species and habitats, we identified risks that were common among species and habitats and developed strategies to address these risks. Rapid urban development in many parts of the state was identified as the most potent risk to our wildlife, devastating the health of many terrestrial, wetland, and aquatic populations and irreversibly fragmenting their habitats. Urban development is outpacing land protection. We need to respond by helping communities integrate wildlife habitat conservation into decisions about development. To meet this goal, we will:

• Provide public and private entities at all levels in the urban development and planning communities with information and assistance, including conservation science, maps, and mitigation guidelines to encourage sustainable development in sensitive wildlife areas

• Consider proactive strategies such as landowner incentives and voluntary land protection

Regional air and water quality issues scored among the most threatening problems for wildlife, both in terms of broad cumulative degradation and intense localized impacts. In response, we will:

• Promote the inclusion of wildlife in structured risk assessments by agencies engaged in energy, transportation, and industrial development projects
• Promote regional and national policies and funding that improve air and water quality for New Hampshire's wildlife and people

Some habitats have been degraded to the point that wildlife species associated with them will be lost without human intervention. To maintain our biodiversity and landscape integrity, we will:

• Guide management and restoration of rare and declining plants, animals, habitats, and natural communities
• Address human and ecological issues that threaten New Hampshire's biodiversity with strategies such as population management, habitat management and, when necessary, regulatory protection

There is a critical need to obtain, store, and manage data on the status and condition of New Hampshire's wildlife. Current information is essential to providing the best conservation science and monitoring. We will:

• Compile, manage, and analyze information about New Hampshire's wildlife; assess risks; and prioritize conservation actions
• Develop a system to monitor ecological health and management performance
• Adapt to changing conditions

Strategies for Planners, Conservation Committees and Others Interested in Land Conservation

The Wildlife Action Plan provides a comprehensive list of strategies to conserve wildlife and habitats statewide. For town planners and conservation commissions, there are several strategies aimed at providing them with the information they need to protect wildlife habitat and open space in their communities.

A few of the strategies are:

Mapping Tools:	Strategy Number	Page
Map Landscape Potential for Wildlife Habitat, Potential Wildlife Corridors and Buffers	204 205	5-7 5-8
Produce and Deliver Planning Maps	206	5-8

Habitat Management Tools:		
Landowner Education Series	302	5-9
Revise and Promote Agricultural Best Management Practices	304	5-10
Promote Sustainable Forestry Practices	305	5-10
Safe Harbor Agreements to Protect Habitat of Threatened and Endangered Species	804	5-13

Education and Outreach:		
Advise Town Conservation Commissions, Planning Boards and Open Space Committees	306 1302	5-10 5-23

Open Space and Conservation Land Protection:		
Develop a Comprehensive Land Protection Support Program	703	5-21
Financial Incentives to Maintain Private Land in Open Space	802	5-22
Financial and Technical Assistance for Habitat Management and Restoration	801	5-22
Financial Incentives to Promote Sustainable Forestry Practices	803	5-22

Local and Regional Planning:		
Develop and Implement Existing Regional Conservation Planning	1101	5-27
Incorporate Habitat Conservation Into Local Land Planning	1301	5-29
Promote Role of the Regional Planning Commissions in Landscape-Scale Conservation	1303	5-29
Regional Conservation Planning for Species and Habitats At Risk	1102	5-27
Promote a Transportation Working Group	603	5-18
Promote a Sustainable Development Working Group	604	5-19
Promote a Forest Sustainability Work Team	606	5-19